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McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS, Fourth Edition

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fits, and assembles components or parts and adjusts the finished product to function as intended. {ə'sem-blē,rō,bāt}

assembly routine See assembler. {ə'sem-blē,rū'tēn}

assembly system [COMPUT SCI] An automatic programming software system with a programming language and machine-language programs that aid the programmer by performing different functions such as checkout and updating. {ə'sem-blē,sistəm}

assembly time [ENG] 1. The elapsed time after the application of an adhesive until its strength becomes effective. 2. The time elapsed in performing an assembly or subassembly operation. {ə'sem-blē,tīm}

assembly unit [COMPUT SCI] 1. A device which performs the function of associating and joining several parts or piecing together a program. 2. A portion of a program which is capable of being assembled into a larger program. {ə'sem-blē,'yū-nət}

assessment drilling [MIN ENG] Drilling to fulfill the requirement that a prescribed amount of work be done annually on an unpatented mining claim to retain title. Also known as annual labor. {ə'ses-mənt,'dril-ŋ}

assessment work [MIN ENG] Annual work at an unpatented mining claim in the public domain performed under law to maintain the claim title. {ə'ses-mənt,'wɜ:k}

assets [IND ENG] All the resources, rights, and property owned by a person or a company; the book value of these items as shown on the balance sheet. {'a,sets}

assign [COMPUT SCI] A control statement in FORTRAN which assigns a computed value i to a variable k , the latter representing the number of the statement to which control is then transferred. {ə'saɪn}

assignable cause [IND ENG] Any identifiable factor which causes variation in a process outside the predicted limits, thereby altering quality. {ə'saɪn-ə-bəl,'kôz}

assignment problem [COMPUT SCI] A special case of the transportation problem in a linear program, in which the number of sources (assignees) equals the number of designations (assignments) and each supply and each demand equals 1. {ə'saɪn-mənt,'prəb-ləm}

assignment statement [COMPUT SCI] A statement in a computer program that assigns a value to a variable. {ə'saɪn-mənt,'stāt-mənt}

assil cotton [TEXT] A long-staple Egyptian cotton characterized by high tensile strength. {'äs-silē,'kät-ən}

assimilation [GEOL] Incorporation of solid or fluid material that was originally in the rock wall into a magma. [PHYSIO] Conversion of nutritive materials into protoplasm. {ə'sim-ə'lā-shən}

assimilative nitrate reduction [MICROBIO] The reduction of nitrates by some aerobic bacteria for purposes of assimilation. {ə'sim-ə'lād-iv,'nī-trät ri,də'k-shən}

assimilative sulfate reduction [MICROBIO] The reduction of sulfates by certain obligate anaerobic bacteria for purposes of assimilation. {ə'sim-ə'lād-iv,'söl,fät ri,də'k-shən}

assisted panel [COMPUT SCI] In an interactive system, a screen that explains a question the computer has asked, the available options, the expected format, and so forth. {ə'sis-təd,'pan-əl}

assisted takeoff [AERO ENG] A takeoff of an aircraft or a missile by using a supplementary source of power, usually rockets. {ə'sis-təd,'tāk-ōf}

assize [CIV ENG] 1. A cylindrical block of stone forming one unit in a column. 2. A layer of stonework. {ə'siz}

Assmann psychrometer [ENG] A special form of the aspiration psychrometer in which the thermometric elements are well shielded from radiation. {'äs,män,'sī'kräm-əd-ər}

associate [PSYCH] An item or event that is linked to another in the mind of an individual. {ə'sō-sē,ät}

associate curve See Bertrand curve. {ə'sō-sē,ät,'käv}

associated automatic movement See synkinesia. {ə'sō-sē,äd-əd,'öd-ə'mad-ik 'müv-mənt}

associated corpuscular emission [GEOPHYS] The full complement of secondary charged particles associated with the passage of an x-ray or gamma-ray beam through air. {ə'sō-sē,äd-əd,'kör-pəs-kyə-lər i'mish-ən}

associated gas [PETRO ENG] Gaseous hydrocarbons occurring as a free-gas phase under original oil-reservoir conditions of temperature and pressure. Also known as gas-cap gas. {ə'sō-sē,äd-əd,'gas}

associated production [PARTIC PHYS] Production of strange particles invariably in twos, never one particle alone. {ə'sō-sē,äd-əd prə'də'k-shən}

associate matrix See Hermitian conjugate of a matrix. {ə'sō-sē,ät,'mä-triks}

associate operator See adjoint operator. {ə'sō-sē,ät,'öp-ə-rād-ər}

association [ASTRON] A sparsely populated grouping of very young stars that appear to have had a common origin and have not yet had time to disperse. [CHEM] Combination or correlation of substances or functions. [ECOL] Major segment of a biome formed by a climax community, such as an oak-hickory forest of the deciduous forest biome. [PSYCH] A connection formed through learning. {ə'sō-sē,ä'shən}

association area [PHYSIO] An area of the cerebral cortex that is thought to link and coordinate activities of the projection areas. {ə'sō-sē,ä'shən,'er-ə}

association center [INV ZOO] In invertebrates, a nervous center coordinating and distributing stimuli from sensory receptors. {ə'sō-sē,ä'shən,'sen-tər}

association fiber [ANAT] One of the white nerve fibers situated just beneath the cortical substance and connecting the adjacent cerebral gyri. {ə'sō-sē,ä'shən,'fi-bər}

association neuron [ANAT] A neuron, usually within the central nervous system, between sensory and motor neurons. {ə'sō-sē,ä'shən,'ni:ron}

association test [PSYCH] Any test designed to determine the nature of the mental or emotional link between a stimulus and a response. {ə'sō-sē,ä'shən,'test}

association trail [COMPUT SCI] A linkage between two or more documents or items of information, discovered during the process of their examination and recorded with the aid of an information retrieval system. {ə'sō-sē,ä'shən,'träl}

associative algebra [MATH] An algebra in which the vector multiplication obeys the associative law. {ə'sō-sē,äd-iv 'al-jē-brä}

associative dimensioning system [COMPUT SCI] A system for making automatic changes in the dimensions of workpieces manufactured by machine tools. {ə'sō-sē,äd-iv di'men-shən-ŋ 'sistəm}

associative facilitation [PSYCH] Ease in establishing a new association because of previous associations. {ə'sō-sē,äd-iv fä'sil-ə'tā-shən}

associative inhibition [PSYCH] Difficulty in establishing a new association because of previous associations. {ə'sō-sē,äd-iv,'in-ə'bish-ən}

associative key [COMPUT SCI] In a computer system with an associative memory, a field used to reference items through comparing the value of the field with corresponding fields in each memory cell and retrieving the contents of matching cells. {ə'sō-sē,äd-iv 'kē}

associative law [MATH] For a binary operation designated \circ , the relationship expressed by $a \circ (b \circ c) = (a \circ b) \circ c$. {ə'sō-sē,äd-iv 'lō}

associative learning [PSYCH] The principle that items experienced together are mentally linked so that they tend to reinforce one another. {ə'sō-sē,äd-iv 'lär-nŋ}

associative memory [COMPUT SCI] A data-storage device in which a location is identified by its informational content rather than by names, addresses, or relative positions, and from which the data may be retrieved. Also known as associative storage. [PSYCH] Recalling a previously experienced item by thinking of something that is linked with it, thus invoking the association. {ə'sō-sē,äd-iv 'mem-rē}

associative processor [COMPUT SCI] A digital computer that consists of a content-addressable memory and means for searching rapidly changing random digital data stored within, at speeds up to 1000 times faster than conventional digital computers. {ə'sō-sē,äd-iv 'präs-es-ər}

associative storage See associative memory. {ə'sō-sē,äd-iv 'stōrij}

associative thinking [PSYCH] 1. The mental process of making associations between a given subject and all pertinent present factors without drawing on past experience. 2. Free association. {ə'sō-sē,äd-iv 'think-ŋ}

associator [COMPUT SCI] A device for bringing like entities into conjunction or juxtaposition. {ə'sō-sē,äd-ər}

assortative mating [GEN] Nonrandom mating with respect to phenotypes. {ə'sōrd-əd-iv 'mä-dŋ}

cooling process

cooling process [ENG] Physical operation in which heat is removed from process fluids or solids; may be by evaporation of liquids, expansion of gases, radiation or heat exchange to a cooler fluid stream, and so on. { 'kūl-īŋ, prās-əs }

cooling range [MECH ENG] The difference in temperature between the hot water entering and the cold water leaving a cooling tower. { 'kūl-īŋ, rāŋ }

cooling stress [MECH] Stress resulting from uneven contraction during cooling of metals and ceramics due to uneven temperature distribution. { 'kūl-īŋ, stres }

cooling table See hotbed. { 'kūl-īŋ, tā-bəl }

cooling tower [ENG] A towerlike device in which atmospheric air circulates and cools warm water, generally by direct contact (evaporation). { 'kūl-īŋ, tā-ər }

coolometer [ENG] An instrument which measures the cooling power of the air, consisting of a metal cylinder electrically heated to maintain a constant temperature; the electrical heating power required is taken as a measure of the air's cooling power. { kū'lām-əd-ər }

cool star [ASTROPHYS] A low-temperature star, generally visible in the infrared range of the electromagnetic spectrum. { 'kūl, stār }

cool time [MET] The period of time between successive heat times in pulsation and seam welding. { 'kūl, tīm }

Coombs serum [IMMUNOL] An immune serum containing antiglobulin that is used in testing for Rh and other sensitizations. { 'kūmz, sir-əm }

cooperative observer [METEOROL] An unpaid observer who maintains a meteorological station for the U.S. National Weather Service. { kō'āprəd-iv əb'zərv-ər }

cooperative phenomenon [SOLID STATE] A process that involves a simultaneous collective interaction among many atoms or electrons in a crystal, such as ferromagnetism, superconductivity, and order-disorder transformations. { kō'āprəd-iv fə'nām-ə-nən }

cooperative system [ENG] A missile guidance system that requires transmission of information from a remote ground station to a missile in flight, processing of the information by the missile-borne equipment, and retransmission of the processed data to the originating or other remote ground stations, as in azusa and dovap. { kō'āprəd-iv, sis-təm }

cooperite [MINERAL] (Pt,Pd)S A steel-gray tetragonal mineral of metallic luster consisting of a sulfide of platinum, occurring in irregular grains in igneous rock. { 'kū-pə, rīt }

Cooper pairs [SOLID STATE] Pairs of bound electrons which occur in a superconducting medium according to the Bardeen-Cooper-Schrieffer theory. { 'kū-pər, perz }

coordinate addressing [COMPUT SCI] The use of cartesian coordinates to specify a location, such as the position of a character in an electronic display. { kō'örd-ən-ət 'ad, res-īŋ }

coordinate axes [MATH] One of a set of lines or curves used to define a coordinate system; the value of one of the coordinates uniquely determines the location of a point on the axis, while the values of the other coordinates vanish on the axis. { kō'örd-ən-ət 'ak, sēz }

coordinate bond See coordinate valence; dative bond. { kō'örd-ən-ət 'bānd }

coordinate conversion [MAP] Changing the map coordinate values from one system to those of another system. { kō'örd-ən-ət kən'vərzhən }

coordinate data receiver [ELECTR] A receiver specifically designed to accept the signal of a coordinate data transmitter and reconvert this signal into a form suitable for input to associated equipment such as a plotting board, computer, or radar set. { kō'örd-ən-ət 'dād-ə rī, sēv-ər }

coordinate data transmitter [ELECTR] A transmitter that accepts two or more coordinates, such as those representing a target position, and converts them into a form suitable for transmission. { kō'örd-ən-ət 'dād-ə tranz, mid-ər }

coordinated-axis control [CONT SYS] Robotic control in which the robot axes reach their end points simultaneously, thus giving the robot's motion a smooth appearance. { kō'örd-ən, ād-əd 'ak, sas kən, trōl }

coordinated complex See coordination compound. { kō'örd-ən, ād-əd 'kām, pleks }

coordinated geometry See COGO. { kō'örd-ən, ād-əd jē'ām-ə-trē }

coordinated transpositions [ELEC] Transpositions which are installed in either electric supply or communications circuits

or in both, for the purpose of reducing inductive coupling, and which are located effectively with respect to the discontinuities in both the electric supply and communications circuits. { kō'örd-ən, ād-əd tranz-pə'zish-ən }

coordinate indexing [COMPUT SCI] An indexing scheme in which equal-rank descriptors are used to describe a document, for information retrieval by a computer or other means. { kō'örd-ən-ət 'in, deks-īŋ }

coordinate plotter [GRAPHICS] An automated drafting device in which a transverse beam and drafting head are driven over a drawing surface by a computer and tape readers to produce highly precise drawings at high speed. Also known as mechanical plotting board; XY coordinate plotter; XY plotter. { kō'örd-ən-ət 'plād-ər }

coordinates [MAP] 1. Linear or angular quantities which designate the position that a point occupies in a given reference frame or system. 2. A general term to designate the particular kind of reference frame or system, such as plane rectangular coordinates or spherical coordinates. [MATH] A set of numbers which locate a point in space. { kō'örd-ən-ats }

coordinate storage See matrix storage. { kō'örd-ən-ət 'stōr-īŋ }

coordinate systems [MATH] A rule for designating each point in space by a set of numbers. { kō'örd-ən-ət, sis-təmz }

coordinate transformation [MATH] A mathematical or graphic process of obtaining a modified set of coordinates by performing some nonsingular operation on the coordinate axes, such as rotating or translating them. { kō'örd-ən-ət tranz-fər'māsh-ən }

coordinate valence [CHEM] A chemical bond between two atoms in which a shared pair of electrons forms the bond and the pair has been supplied by one of the two atoms. Also known as coordinate bond. { kō'örd-ən-ət 'vā-lens }

coordinating holes [DES ENG] Holes in two parts of an assembly which form a single continuous hole when the parts are joined. { kō'örd-ən, ād-īŋ, hōlz }

coordination [ELEC] Design of series-connected circuit breakers whereby breakers with lower current ratings trip before those with higher ratings. { kō'örd-ən'ā-shən }

coordination chemistry [CHEM] The chemistry of metal ions in their interactions with other molecules or ions. { kō'örd-ən'ā-shən 'kem-ə-strē }

coordination compound [CHEM] A compound with a central atom or ion and a group of ions or molecules surrounding it. Also known as coordinated complex; Werner complex. { kō'örd-ən'ā-shən, 'kām, paund }

coordination lattice [CRYSTAL] The crystal structure of a coordination compound. { kō'örd-ən'ā-shən, 'lad-əs }

coordination number [PHYS] The number of nearest neighbors of a point in a space lattice, of an atom or an ion in a solid, or of an anion or cation in a solution. { kō'örd-ən'ā-shən, 'nām-bər }

coordination polygon [CHEM] The symmetrical polygonal chemical structure of simple polyatomic aggregates having coordination numbers of 4 or less. { kō'örd-ən'ā-shən, 'pāl-i-gān }

coordination polyhedron [CHEM] The symmetrical polyhedral chemical structure of relatively simple polyatomic aggregates having coordination numbers of 4 to 8. { kō'örd-ən'ā-shən, 'pāl-i-hē-drən }

coordination polymer [ORG CHEM] Organic addition polymer that is neither free-radical nor simply ionic; prepared by catalysts that combine an organometallic (for example, triethyl aluminum) and a transition metal compound (for example, TiCl₄). { kō'örd-ən'ā-shən, 'pāl-ə-mər }

coorongite [GEOL] A boghead coal in the peat stage. { kō'örd-ən, 'rōŋ-jīt }

copaiba balsam [MATER] An oleoresin extracted from trees of the genus *Copaifera* of South America; used as a plasticizer and in medicine. { kō'pī-bā 'bōl-səm }

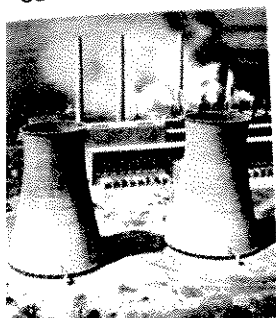
copal [MATER] Hard, resinous substance exuded from certain trees in the East Indies, South America, and Africa and used in varnish and printing ink. { 'kō-pəl }

cope [MET] The upper portion of a flask, mold, or pattern. { 'kōp }

cope chisel [DES ENG] A chisel used to cut grooves in metal. { 'kōp, 'chiz-əl }

Copenhagen water See normal water. { 'kō-pən, 'häg-ən, wōt-ər }

COOLING TOWER



eral-draft cooling towers.
nan, Inc.)

COORDINATION
POLYHEDRON

polyhedron	Geometry	Arrangement of atoms	Example
tetrahedron			CH ₄ , PCl ₄
gonal bipyramid			PCl ₅ , Fe(CO) ₅
octahedron			SF ₆ , [Co(NH ₃) ₆] ³⁺
trigonal bipyramid			(ZrF ₆) ⁴⁻ , IF ₆
cube			

Types of coordination polyhedrons.

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